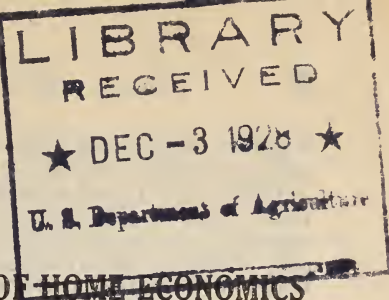


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REPORT OF THE CHIEF OF THE BUREAU OF HOME ECONOMICS

UNITED STATES DEPARTMENT OF AGRICULTURE,
BUREAU OF HOME ECONOMICS,
Washington, D. C., September 7, 1928.

SIR: I have the honor to present herewith the report of the Bureau of Home Economics for the fiscal year ended June 30, 1928.

LOUISE STANLEY, *Chief.*

Hon. W. M. JARDINE,
Secretary of Agriculture.

The fifth year of the Bureau of Home Economics was completed June 30, 1928. In submitting the report for the past year it seems wise, in showing the progress of our major activities, to point out their contribution to a national program for better living and to trace briefly their relation to other lines of national development. The United States leads all other nations in its opportunity to develop such a program and in its effort to make possible satisfying living conditions for all. Our national resources and our agricultural, industrial, and commercial development all contribute to this end; but if they are to function to the greatest possible extent there must be a more definite understanding of what is a satisfactory standard of living.

Fundamentally sound standards must be developed which provide optimum conditions for family and individual development. Such standards will never be static but must always embody the results of the latest scientific research as they can be applied in bettering conditions of living in the home. As these standards are worked out there must be social and economic adjustments between the goods produced, the services available, and those which are needed in the home. Further standards are essential for the education of the consumer in the wise use of the goods produced in such abundance. Not only will such an educational program of consumption add to the physical well-being and mental satisfaction of

the individual, but also, through the better adjusted production and distribution, which it would make possible, will contribute to the social and economic stability of the country as a whole.

Food is one of the prime considerations in any standard of living. The economic value of the agencies concerned in food production, manufacture, and distribution, as well as the close relation of food to health and physical well-being, emphasizes the importance of a more stable food production and distribution program based on nutritional requirements. Production and distribution programs for food, especially perishables, must be considered in terms of dietary needs. Producers have been slow to see this. There have been no definite food-production programs. Fluctuating market demands have tended to create surpluses, alternating with periods of low production. These have been variously explained, but this much is clear: Lack of cooperation of producing groups and lack of knowledge of what markets can absorb satisfactorily have contributed to the problem. In years of surplus the consumer has been urged to use more of certain foodstuffs than was humanly possible.

It is much more difficult to establish standards for clothing than for food. Clothing is not so directly related to health, but often indicates social and economic status. Furthermore, the importance of cotton and wool production to agriculture in this

country emphasizes the need of a more intelligent utilization of textiles.

With these broad considerations in mind, specific projects have been organized in foods and nutrition, textiles and clothing, and economic problems which will assist in solving some of these consumption questions.

FOODS AND NUTRITION

FOOD COMPOSITION

If the value of food products is to be measured in terms of dietary needs it must be on a basis of composition. The need for this was early recognized by W. O. Atwater, of the Department of Agriculture. He collected and assembled the available data on food composition which have been the basis for much of the nutrition work in this country. One of the major activities of this bureau, since its establishment in 1923, has been the summarizing of all material available on food composition in order to bring Doctor Atwater's compilation up to date. The last revision of his figures was published in 1906. Since that time new foods have appeared and new analyses of staple foods have been made. In collecting the new figures on food composition these changes are being considered, and the data are being studied in detail by specialists in food production from other bureaus in order that the final averages may be representative of the foods now on the market.

Following this method, figures on wholesale cuts of beef have been published, and data on the composition of fresh fruits and fruit juices are in press.

DIETARIES

The fundamental basis of any plan for food distribution, as well as any educational program of nutrition, is knowledge of present food habits. Dietary studies made by the Department of Agriculture under Doctor Atwater's direction from 1890 to 1905 are still outstanding in this field. The bureau has, since its establishment, studied the food consumption of farm families, using data obtained in farm standard-of-living studies in cooperation with the Bureau of Agricultural Economics.

The average quantity and money value of the foodstuffs consumed by these families have been determined, and the nutritive value of these average diets has been calculated in terms of calories, protein, calcium, phosphorus, and iron, and checked against

nutritional standards. The distribution of the calories and the other factors among the various food groups has been shown. The analysis of such data from 2,500 families in nine States is now completed and is being prepared for publication. For half of these families the individual dietaries also have been analyzed to determine nutritive value and money value and the relation of these to the amount of food furnished by the farm. Food-consumption figures available from other sources are being compiled for comparison with these figures and will be included in the published results.

The records for these studies have been collected by the so-called survey method, in which the housewife estimates the amount of food used by her family during the preceding year. At the dietary conference called by the bureau in 1926 to discuss the form which future dietary studies should take, question was raised as to the reliability of the figures collected by the survey method as compared with actual food accounts kept from day to day. Since that time the studies of this bureau have been directed toward answering this question.

Data on the food consumption of individual families have been collected by both the account and the survey method. A comparison of the results obtained by the two methods has been based on over 150 family account books that have been kept during the past year and on twice that many survey schedules from the same or comparable families.

In connection with this study of method, figures on food consumption have at the same time been obtained from families consuming a minimum of food and from families of professional and business men. The food consumption of various institutional groups also has been determined. In cooperation with the home economics departments of State colleges, figures have been collected from 58 college residence halls. Food records have also been obtained from 14 correctional and charitable institutions for children, supplemented in the case of 4 institutions by detailed individual dietary studies for 80 children, covering three days each.

In the individual dietary study, which was made in cooperation with the United States Public Health Service, each child was given a physical examination. Studies of this kind open up many questions as to criteria for evaluating the diet and for ascertaining the nutritive condition of the

individual. These data are now being examined to see what correlation can be found to exist between diet and health.

As the result of a cooperative arrangement with the Merrill-Palmer School of Detroit, the bureau has had an opportunity to use similar data collected in extended studies of the food habits of about 350 children living on an island near Detroit, Mich. These records in most cases cover three years and include qualitative information on the diet of each child as well as the results of a careful physical examination. Such work, it is believed, is a long step forward in methods of analysis of data of this type.

In order to help standardize the methods used in dietary studies, the bureau published last year a bulletin setting up nutritive standards and methods of applying them to family and institutional groups. A short-cut method of calculating the nutritive value of the diet is now ready for publication. This method has been tested by the bureau and by the States through the cooperation of their resident home-economics divisions. It makes possible a very marked reduction in the time required for such calculations, and will result in a decided saving of cost and time required in making food studies.

As the result of the need shown by the dietary studies made in the children's institutions, additional work is being done in one of these institutions on menus and recipes suitable for such use.

The bureau has been fortunate in having the opportunity of cooperating with five other governmental and national agencies in the work of the Washington Child Research Center. The direction of the noonday lunch at this center has furnished a practical laboratory for the nutritionists on the staff which has been especially valuable since all problems have been studied in cooperation with the parents, a pediatrician, and a practical psychologist. Additional cooperative studies are contemplated for the coming year.

VITAMINS

In no one line of nutrition work has there been more rapid advance during the past few years than in our knowledge of vitamins and their relation to the promotion of health and prevention of diseases. Knowledge of the occurrence of these vitamins in foods is

important. It is also desirable that we know the foodstuff in which they are present, especially in the case of products prepared from natural foods by selection and processing.

The bureau has maintained for the past three years a nutrition laboratory for studying the vitamin content of foods. During the past year the study of the vitamin A, B, C, and D content of three samples of honey and one sample of honeycomb has been completed. The results of this study indicate that no appreciable amount of any of these four vitamins is present.

The recommendation of pediatricians for the routine feeding of codliver oil to children has brought on the market a number of cod-liver oil concentrates of varying value. In one of these studied in our laboratory during the past year, at the request of the Bureau of Chemistry and Soils, the amount of vitamin A was found to be much less than that claimed by the manufacturers.

In connection with the horticultural department of the University of Maryland, a study of the vitamin content of several varieties of spinach has been made. All samples were grown on the same plot of soil so as to rule out the factors entering into growth. A sample of each variety has been canned so that a comparison can be made of the vitamin content of the canned product after a period of storage. The varieties selected for study were those which bring out the color differences preferred by commercial canners. Preliminary results indicated that there was little if any difference in the vitamin content of the varieties.

In connection with some work done with a cooperative rice producers' organization, studies have been made of the practical use of rice polishings in the diet. Analyses made by the Bureau of Chemistry and Soils show this product to be very high in mineral content, especially in iron. Rice polishings have long been known to be a valuable source of the antineuritic factor of vitamin B. Work during the past two years has attached considerable importance to the foods that are a good source of this vitamin. It has formerly been considered one substance, but is evidently a complex of several different factors. Yeast is one of its most valuable sources, and rice polishings are now being studied as a possible substitute for yeast as a source of certain of the vitamin B factors. It is particularly significant at the present time owing to the possi-

bility that it may contain at least in small amount some of the vitamin that has been shown to prevent pellagra, which is still prevalent in portions of the South. Our initial studies show this to be a good source of at least one factor of vitamin B.

During the past two years it has been customary for teachers and nutrition workers to look to this laboratory for young rats to be used in demonstrating feeding experiments. Some 250 rats, 4 weeks of age, have been shipped for this purpose. Reports from those using this type of demonstration material are very enthusiastic. An undernourished animal as the result of an inadequate diet is much more convincing than any amount of abstract discussion of the subject.

PALATABILITY OF MEAT

The final test of the use of any food is palatability. Most of the studies on food production have been economic in nature and have checked the results only in terms of quality and volume. It has been difficult to obtain objective tests for palatability, and few definite studies of this kind have been made. In connection with a study on meat production in which 20 States are cooperating with the department, the bureau has aided in inaugurating and working out an objective palatability test. This is making possible the assignment of a definite palatability score for every sample of meat tested. The scores in turn can be correlated with the known factors of production and breeds. The data on tenderness, which is one of the important factors in producing beef, are being checked by comparative studies in which a mechanical test for tenderness is used.

Along with these studies, in cooperation with the Bureau of Animal Industry, methods for preparing various cuts of beef and lamb have been developed and published in leaflets. These are planned to help the housewife in wise choice and suitable preparation of the many cuts of meat at her disposal.

EXPERIMENTAL COOKERY

Various other foods have been referred to the experimental kitchen for study from time to time. Special mention should be made of the following:

In connection with the work on rice polishings referred to above, studies were made of the ways in which it might be introduced into the diet. It

was found that it can be incorporated into all quick breads up to one-third of the total quantity of flour. Satisfactory light rolls can also be made with it, and the baking laboratory of another bureau prepared bread by their formulas in which rice polishings were substituted for one-fourth of the flour. Cookies were prepared in which it could be used up to one-half of the flour. It is believed that this by-product of milled rice can be used to special advantage in institutions where children are being fed. Our studies have shown that their diets are uniformly low in vitamin B and in minerals. Rice polishings provide in cheap form valuable sources of both of these food constituents.

A study has been started of some of the most important varieties of rice raised in this country in order to discover whether or not the differences attributed to variety are fundamental or are the result of methods of cooking.

Native-grown lentils have been referred to this laboratory for special study. These were tested against the imported samples found on the market. The results showed that of the samples studied, the native-grown lentils cooked more quickly and had a less strong flavor than the imported lentils. Since lentils can be grown in abundance in certain sections of the country, and since they cook so much more quickly than the other dry legumes, it would seem that their production might be encouraged.

TEXTILES AND CLOTHING

CHILDREN'S CLOTHING

The best basis for the establishment of any standard of adequacy in clothing is its relation to health. With this in mind, a number of projects have been started in the Division of Textiles and Clothing which deal with the hygienic aspects of clothing. A study of the weight and character of infants' garments worn in different sections of this country and at different seasons is being made with the assistance of various State colleges, in order to determine recent tendencies. Skin temperatures under different types of fabrics are being measured in an effort to find which fibers and fabrics are more effective in preserving a uniform temperature of the skin.

Projects are also under way on the designing of children's clothing that will be hygienic, comfortable, and easy to launder. In order to be in accord with modern thought on child train-

ing, the garments are being studied in actual use at the Washington Child Research Center and other institutions in Washington. As a result of the investigations completed to date, leaflets on rompers and little girls' dresses have been published. Studies of outdoor garments to be used at nursery schools, of boys' suits, and of suitable designs and materials for children's underwear are still in progress. Increased knowledge concerning the relation of light to calcium utilization by the body has led to the designing of garments for small children which make it possible for them to get a maximum amount of sunlight and yet be clothed modestly. Material on this subject has been published in a leaflet on sun suits. As a by-product of all of these problems, a bibliography of approximately a thousand references on the effect of clothing on health is being prepared.

COTTON FABRICS

Projects dealing specifically with the utilization of cotton in clothing and household textiles have been continued and developed as much as possible. A study of the influence of dress styles and patterns on the cotton yardage used in individual dresses during the past 10 years was published early in the year. The results show that there was no change in general style or silhouette during that period commensurate with the fluctuating demand for yardage. The length of the skirt and of the sleeves were the only style changes which may have been of influence.

The survey of the amount and type of home sewing being done was completed and published. This showed very conclusively that more cotton dresses were being made at home than any other type of garment. The work started on the development of designs of women's dresses appropriate for the use of American-made cotton fabrics was therefore continued. Photographs of these were made available to home makers through the press and rural magazines.

Attention was also given to the possibility of more extensive use of osnaburg for household articles. This is an inexpensive fabric made of short-staple and waste cotton. It is primarily intended for industrial purposes but is an economical and artistic material for home furnishings. Household articles were constructed of this fabric, and publicity was given, by means of

special articles and photographs, to its appropriateness for these purposes. Farmers' Bulletin 1516, Principles of Window Curtaining, which was issued in 1927 to show inexpensive methods of curtaining windows and especially the use of cotton material for this purpose, is being revised.

The effect of construction of fabric and grade and character of cotton on wearing quality is being questioned at the present time in connection with the purchasing of textiles for institutions as well as for home use. This has a direct bearing on the investigations of the Department of Agriculture on the growing of cotton, and it is hoped that a number of studies can be made this coming year in this bureau which will carry the work on raw cotton through the finished fabric. Projects have been outlined in which the wearing qualities of sheets woven of known character and grade of cotton will be studied. As a preliminary step, 500 sheets of known source and history, discarded by one of the Washington hotels, are being studied in an effort to determine the type and kind of wear.

LAUNDERING AND SIZING OF FABRICS

The studies on laundering and sizing of cotton fabrics have been continued. The portion of the work dealing with a method for measuring stiffness of sized materials and the stiffness produced in fabrics by different starches and starch mixtures is ready for publication. The investigations on pliability and adhesiveness of these fabrics will go forward this coming year. A method of artificially soiling materials for experimental studies and of determining the soil removed by various laundering processes has been developed and is being prepared for publication. The study of the effects of various temperatures on the efficiency of the washing process and on the fabrics laundered is still in progress.

WOOLEN FABRICS

Studies on wool are very much needed. A preliminary compilation of material for a bulletin on the selection of wool fabrics has been undertaken. On account of the urgency of other work this has been temporarily put aside, but it is hoped that it can be completed in the near future and studies undertaken on wool similar to those now in progress on cotton.

ECONOMIC STUDIES

FAMILY EXPENDITURES

The housewife has the job of adjusting the family income to meet the various needs of family living, and in the majority of homes it is not an easy matter to stretch the income to cover all these items. Many housewives are therefore recognizing the advantages of planning their expenditures in advance and are seeking assistance in drawing up their budgets. To meet these requests, a bulletin entitled "Planning and Recording Family Expenditures" and a loose-leaf household account book have been issued.

Before suggestions can be made concerning the distribution of the family income among the various items of expenditure, further information is required about the present habits of expenditure among different types of families. In obtaining such information the reliability of the survey method must be considered. Most of the studies of family expenditures up to the present time have been made by this method. It has been recognized that some error must be present in these figures, but the extent of the error and the items most affected have not been known. A study has therefore been made comparing the figures on family expenditures obtained by survey schedules and by daily household accounts. The comparative study of food-consumption figures mentioned under dietaries has been part of this larger study, which has included all items of family expenditure.

For 50 farm families in Maryland two sets of survey schedules have been obtained, covering the years 1925-26 and 1926-27. Twenty-two of these families have kept daily accounts for 1926-27. Similar data are being obtained from groups of farm families in Ohio, Illinois, and Vermont. Particular attention is being given to food, fuel, and ice furnished by the farm.

Through the Bureau of Public Welfare of the District of Columbia, division of mothers' pensions, some 90 account books have become available and are being analyzed. As the account years end, survey schedules will be obtained from these families.

During the past year 76 professional and business families from various parts of the United States have sent in detailed weekly reports of their expenditures. Survey schedules covering the same period have been obtained from 25 of these families. Through the Vassar Institute of Euthenics,

through graduate students of Columbia University, and through groups of the American Association of University Women, survey schedules have been obtained from 125 other families. Account books and survey schedules are thus available for some 200 business and professional families for comparison with the rural studies. In all of these comparisons are being made between the figures from the schedules and those from the household accounts.

In addition to throwing light on method, these data give information on the expenditure habits of these different types of families. As soon as sufficient data have been collected to furnish representative figures they will be used as a basis for suggested family budgets and for expenditure scales for individuals of different sex and age.

TIME STUDIES

Not only has the housewife a responsibility in guiding the money expended for the household, but she must also determine how her time and energy can best be spent and guide the time expenditure of other members of the family. The time spent in various housekeeping duties directly affects the money outlay for food, clothing, and other items, and is affected by the equipment that the household provides. In order to get an adequate basis for suggestions concerning time expenditure and for equipment programs, an extensive study has been undertaken of the use of time by home makers. In this, weekly time records have been collected from 1,100 home makers in 36 States. In connection with these records, information has been obtained in regard to the size and make-up of the family, the amount of other help available, and the equipment used. The editing and classifying of these records is now finished and the tabulation of results has been started. The first report, covering New York households, will soon be ready, and others will follow. These will include a special report of the equipment used by home makers and its effect on the time spent in various tasks.

An additional 1,000 time records have been obtained by cooperating State workers in Idaho, Oregon, Rhode Island, and Washington. During the past year South Dakota has also started such a study with the expectation of adding 300 more records. The blanks and directions for collecting and classifying these records have been furnished by the bureau, and in the

tabulation of results close collaboration is being maintained with the State workers. Results from all of these studies will therefore be comparable and will give a clear picture of the labor situation in the rural home. This will be used in part as a basis for equipment studies.

In order to help the housewife in the choice of tasks when such a choice presents itself, a study has been undertaken to determine the economic value of the housewife's time. The method used in placing a pecuniary value upon the home maker's services must vary according to the purpose that the evaluation is intended to serve. A report is now in preparation discussing the nature and purposes of such valuations and outlining the methods suited to these several purposes. This will be followed by reports on valuations made with three purposes in mind: (1) To provide a basis for choice of work by home makers; (2) to determine the contribution of housewives to the national income; and (3) to improve the economic status of home makers. Some of the data required for these valuations have already been obtained, and the rest will be during the coming year.

The time required for the care of small children is of foremost importance in considering the organization of the home maker's work and the management of her time. The study of time spent in care of babies has therefore been continued and extended to include children up to 3 years of age. During the coming year the results of about 100 detailed weekly records of child care will be presented and compared with figures on care of children obtained in the study of use of time by home makers.

EQUIPMENT STUDIES

There has been much discussion of late concerning labor saving in the home. For the farm housewife, at least, the need of reducing the time and energy required for her work is evident. While the same standards of efficiency that are applicable in industry can not be applied here, some gains can be made through the organization and simplification of work. The greatest promise, however, lies in the use of labor-saving equipment.

The last few years have witnessed a tremendous increase in the manufacture of household equipment. But the very number of the labor-saving devices now available indicates the experimental stage in which they are at

present. There is need for some disinterested agency, in touch with the home and with a knowledge of the scientific principles involved, to study and determine which of them are of value to the housewife under the present situation.

The need for such a study was pointed out in resolutions presented to you, Mr. Secretary, in February, 1928, by J. B. Davidson, representing a group of research workers that met in Chicago in November, 1927. They asked the department to make a study of labor in the farm home for the purpose of ascertaining the relation of mechanical household equipment to the well-being of the farm family. This we feel is being done in the time study referred to above. They also asked the department to make a survey of the amount and nature of research in the field now under way. I wish to report that we have assembled the data which we have on this and have made plans for collecting additional information. In connection with this we are hoping to get some valuable data from the survey by land-grant colleges being conducted under the auspices of the Bureau of Education of the United States Department of Interior. We were further asked to prepare a comprehensive list of suggested research projects and to formulate a coordinated and cooperative program of research in household equipment. Such a program can only be worked out through the cooperative effort of various interested groups. Steps have been taken to enlist their interest, and committees have been appointed to send in suggestions for compilation.

HOUSEHOLD REFRIGERATION

The bureau has been fortunate during the past year in obtaining assistance from the industries concerned in a study of some problems of home refrigeration. While preliminary work on this subject has been carried on in the bureau for two years, the detailed project did not get under way until after September 15. As is usual with such studies, much of the time during the first year has been expended in getting satisfactory equipment and calibrating it. The cooperating companies have supplied three electric refrigerators of the self-contained type and a number of pairs of refrigerators suitable for use with either ice or electric units. Two of the latter have been equipped with electric units.

This makes it possible to compare the two methods of refrigeration as to cost of operation, temperatures maintained, relative humidity, and keeping of food, and also to compare the results obtained when similar ice-cooled boxes are managed in different ways.

Several preliminary studies have been made, such as the comparison of the temperatures and ice consumed in ice-cooled refrigerators of different grades. This showed that as the efficiency of the box increased there was correspondingly a saving in the amount of ice required per unit of cubic space, and a lower temperature was maintained. A simple test showed that wrapping ice retards the efficiency of a refrigerator for cooling food. Preliminary experiments have been carried on in comparable electric and ice-cooled refrigerators to measure the evaporation from uncooked cuts of lamb and to study the methods of keeping lettuce and certain fruits. Careful records have been kept of ice and electric current consumption and temperatures maintained in the refrigerators and of room temperature.

In order to obtain some definite information with reference to refrigeration in a representative number of homes throughout the country, a questionnaire has been prepared and circulated. Extension agents, home economics supervisors and teachers, and home economics association members cooperated in collecting this information. The returns from 1,455 homes having some form of refrigeration are now being tabulated. Of this total 1,300 have ice-cooled, 153 electrically cooled, and 2 gas-fired refrigerators.

A study has been made of recipes for making frozen desserts in the mechanically cooled refrigerator. A popular bulletin on the management of household refrigerators is in process of preparation.

In order to determine the temperature which should be demanded in the refrigerator, bacteriological studies were started January 1, 1928. A laboratory has been equipped, and the literature in this field has been reviewed. The laboratory work to date has been devoted largely to a study of the keeping of milk in household refrigerators. Milk was chosen because it is a food in which bacteria develop rapidly and also because it lends itself to such experimental work.

Some study has been made of absorption of flavor and bacteriology of ice cubes frozen in the mechanical units. It was found that bacterial

increase during a period of 25 days was practically negligible. The condition of the cubes after storage was found to depend largely on the original condition of the water and the care of the refrigerator. Some preliminary work has been done and is to be continued in connection with the absorption of flavors and odors in ice cubes as well as the desirability of using covers on trays.

An annotated list of 113 references to books and periodical literature on household refrigeration has been prepared. The bureau is cooperating with the American engineering standards committee in formulating specifications for household refrigerators. The work is being organized by this standards committee with the expectation that it will be carried forward under the sponsorship of the Bureau of Home Economics and the American Society of Refrigerating Engineers. We feel that this type of organization which gives us contacts with the engineering and producing groups is exceedingly valuable and helpful and is pointing the way in which other types of household equipment may be studied successfully.

THE LIBRARY

The work in the library has been directed largely to making the facilities easily accessible to the bureau staff. This has been accomplished by completing the cataloguing of the 2,000 volumes which are on our shelves and by indexing current periodical material. Gradually a card catalogue is being built up of subject matter in the different fields of home economics which is not only of value to the members of the staff, but can also be used by State home economics workers.

PUBLICATIONS AND INFORMATION SERVICE

Results of this research have continued to be issued, as in previous years, in the form of bulletins, leaflets, and other department publications, in articles contributed to magazines and newspapers, and in radio releases.

The following publications have been issued in the regular series of the department or as special contributions of the bureau:

Planning and Recording Family Expenditures. Chase G. Woodhouse. Farmers' Bulletin 1553.
Record of Family Expenditures. Chase C. Woodhouse. Loose-leaf household account book, sold through the Office of the Superintendent of Documents. (Unnumbered.)

Present Trends in Home Sewing. Ruth O'Brien and Maude Campbell. Miscellaneous Publication 4.
Children's Rompers. Mary Aleen Davis. Leaflet 11.
Cooking Beef According to the Cut. Lucy M. Alexander and Fanny Walker Yeatman. Leaflet 17.
Sun Suits for Children. Ruth O'Brien. Leaflet 24.
Dresses for the Little Girl. Maude Campbell. Leaflet 26.
Lamb as You Like It. Lucy M. Alexander and Fanny Walker Yeatman. Leaflet 28.
The Convenient Kitchen. Series of 8 charts, sold through the Office of the Superintendent of Documents. (Unnumbered.)

Manuscripts for four more bulletins are in press or ready for printing.

The information service to newspapers, magazines, and trade journals

was increased to a total of 375 items prepared and distributed during the year. The Housekeepers' Chats prepared by the radio service from material furnished by this bureau were also continued in the form of five releases each week throughout the winter and early summer.

These increased publicity services have brought a larger number of inquiries to the bureau, and during the past year 10,000 letters asking specific questions on a wide range of topics have been answered as part of our information service to home makers and professional home-economics workers.

